

**OVERSIGHT OF THE 2000 CENSUS: A MIDTERM  
EVALUATION OF THE LOCAL UPDATE OF CEN-  
SUS ADDRESSES PROGRAM**

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**HEARING**

BEFORE THE

SUBCOMMITTEE ON THE CENSUS

OF THE

**COMMITTEE ON  
GOVERNMENT REFORM**

**HOUSE OF REPRESENTATIVES**

ONE HUNDRED SIXTH CONGRESS

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## OVERSIGHT OF THE 2000 CENSUS: A MID-TERM EVALUATION OF THE LOCAL UPDATE OF CENSUS ADDRESSES PROGRAM

WEDNESDAY, SEPTEMBER 29, 1999

HOUSE OF REPRESENTATIVES,  
SUBCOMMITTEE ON THE CENSUS,  
COMMITTEE ON GOVERNMENT REFORM,  
*Washington, DC.*

The subcommittee met, pursuant to notice, at 10 a.m., in room 2247, Rayburn Building, Hon. Dan Miller (chairman of the subcommittee) presiding.

Present: Representatives Maloney, Ryan, and Davis.

Staff present: Thomas W. Brierton, deputy staff director; Jenifer M. Safavian, chief counsel; Timothy J. Maney, chief investigator; David Flaherty, senior data analyst; Erin Yeatman, press secretary; Esther Skelley, professional staff member; Jo Powers, assistant press secretary; Amy Althoff, clerk; Michelle Ash, minority counsel; David McMillen and Mark Stephenson, minority professional staff members; and Ellen Rayner, minority chief clerk.

Mr. MILLER. Since we have a quorum present with the two of us, we will proceed. We will start with an opening statement that I will present, and then Mrs. Maloney will have one, and then we will proceed to our first panel.

As we begin this hearing today, please allow me to reiterate the very important goal that we all share, that we all want the most accurate census possible next year. As a result, we are here today to receive an interim update on the local update of census addresses [LUCA] for the 2000 census. We have heard glowing reports from the Census Bureau on the LUCA process and some mixed results and reports from out in the field. So, we're here today to see just how the process has been working. Please allow me to reiterate that this is an interim report. The LUCA report is ongoing, and this is in no way intended to be a final report of the process.

The GAO findings that I will be referring to is a review of the city-style address portion of LUCA, or LUCA 1998. It is my understanding that the city-style addresses cover approximately 80 percent of the Nation's homes. The LUCA program was designed to improve the accuracy of the decennial census by partnering the Census Bureau with local and tribal governments to review and correct the master address file. The master address file is an address list that identifies all housing units nationwide. It is really the building block for the census, and it is imperative that the address file be as complete and accurate as possible.

In fact, in a 1995 report, the National Academy of Sciences asserts, "Approximately one-half of the census undercount is attributable to missing housing units." The LUCA program was made possible by the Census Addresses List Improvement Act of 1994, which for the first time ever authorized representatives from both local and tribal governments to review and correct census address files prior to census day. The Census Bureau has asked local governments to review address lists to help pinpoint individual and clusters of missing housing units, misallocations, or incorrectly displayed political boundaries. Who better to point out corrections than local officials who live and work in that area? I must say, that while I think LUCA is a great program and a vital part of the decennial census, I would be remiss if I said I believed LUCA alone replaces the need for post census local review. I believe that a review or quality check of the address list is essential before and after census day.

We have heard previously that LUCA has garnered a very high participation rate. However, the GAO's finding on LUCA quantified the participation rate at 40 percent. I am somewhat perplexed with this discrepancy. I'm still concerned that if we rely solely on LUCA, the vast majorities of cities and towns not participating in LUCA will have no quality control at the local level.

According to GAO's findings, the Census Bureau has received over 7.7 million suggested changes to the address file as a result of the LUCA 1998 process. Over 5 million of these suggestions were additions to the address file. These preliminary numbers are extraordinary to me.

While checking the housing counts before the census through LUCA is worthwhile—I believe it pales in comparison to the quality check done after census day. And the more we can involve local government in the census, the better.

With that being said, I look forward to an open and informative discussion today. It is my understanding that the Census Bureau is presently in the late stages of the LUCA program. We are honored to have Dr. Prewitt with us again here this week to report on how the LUCA program is working thus far. The GAO has conducted a survey on the ongoing process and we will hear their preliminary findings.

In addition, we have several participants in the LUCA program who have traveled here from around the country to provide us with some firsthand insight into the process, and I look forward to hearing witnesses today. Mrs. Maloney.

[The prepared statement of Hon. Dan Miller follows:]

## SUBCOMMITTEE ON THE CENSUS

**The Honorable Dan Miller, Chairman**

**H1-114 O'Neill House Office Building, Washington, D.C. 20515**

FOR IMMEDIATE RELEASE

Contact: Erin Yeatman 226-1973

September 29, 1999

### STATEMENT OF CHAIRMAN DAN MILLER

September 29, 1999

**"Oversight of the 2000 Census: A Midterm Evaluation of the Local Update of Census Addresses Program."**

As we begin this hearing today please allow me to reiterate the very important goal that we all share-- we all want the most accurate census possible next year. As a result, we are here today to receive an interim update on the Local Update of Census Addresses or LUCA program for the 2000 Census. We have heard glowing reports from the Census Bureau on the LUCA process and some mixed reports from out in the field. So we are here today to see just how the process has been working.

Please allow me to reiterate that this is an **interim** report, the LUCA program is ongoing and this is in no way intended to be a final report card of the process. The GAO findings that I will be referring to are a review of the city style address portion of LUCA or LUCA 98. It is my understanding that city style addresses cover approximately 80% of this nation's homes.

The LUCA program was designed to improve the accuracy of the decennial census by partnering the Census Bureau with local and tribal governments to review and correct the Master Address File or MAF. The Master Address File is an address list that identifies all housing units nationwide. It is really the building block for the census and it is imperative that the address file be as complete and accurate as possible. In fact, in a 1995 report, the National Academy of Sciences asserts "Approximately one-half of census undercount is attributable to missed housing units."

The LUCA program was made possible by the Census Address List Improvement Act of 1994 which, for the first time ever, authorized representatives from both local and tribal governments to review and correct the census address file prior to census day. The Census Bureau has asked local governments to review address lists to help pinpoint individual and clusters of missed housing units, misallocations or incorrectly displayed political boundaries. Who better to point out corrections than the local officials who live and work in that area? I must say that while I think LUCA is a great program and a vital part of the decennial census, I would be remiss if I said I believe LUCA alone replaces the need for a Post Census Local Review program. I believe that a review or quality check of the address list is essential before and after Census day.

We have heard previously that LUCA has garnered a very high participation rate. However, the GAO's findings on LUCA quantify the participation rate at 40%. I am somewhat perplexed with this discrepancy. I am still concerned that if we rely solely on LUCA, the vast majority of cities and towns not participating in LUCA will have no quality control at the local level.

According to GAO's findings, the Census Bureau has received over 7.7 million suggested changes to the address file as a result of the LUCA 98 process. Over 5 million of these suggestions were additions to the address file. These preliminary numbers are extraordinary to me.

While checking the housing counts before the census through LUCA is worthwhile, I believe it pales in comparison to the quality of a check done after census day. The more we can involve local governments in the census, the better.

With that being said, I do look forward to an open and informative discussion today. It is my understanding that the Census Bureau is presently in the late stages of the LUCA program. We are honored to have Director Prewitt here to report just how the LUCA program is working thus far. The General Accounting Office has conducted a survey of the ongoing process and we will hear their preliminary findings. In addition, we have several participants in the LUCA program who have traveled here to provide us with some first hand insight into the process. I look forward to hearing from today's witnesses.



Mrs. MALONEY. Thank you, Mr. Chairman. I am pleased that you have scheduled this hearing on the local update of census addresses program [LUCA]. The program is new for the 2000 census and designed to correct some of the problems of the past. Even though the program is not yet completed and final results are not available, congressional oversight of LUCA is entirely appropriate.

I also want to thank you for accommodating the wishes of the minority with regard to witnesses. I would like to mention and applaud the hard work of Representatives Thomas Sawyer and Thomas Petri, former members of the Census Subcommittee. After the 1990 census, they realized that one of its major deficiencies was the way in which local governments had the opportunity to review addresses in their jurisdictions. They worked together in a bipartisan manner to improve the process, and the result was Public Law 104-130, the Census Address List Improvement Act of 1994.

I believe this program represents a tremendous improvement over the local review as it was conducted in 1990. LUCA is a partnership between the Census Bureau and local and tribal governments across the Nation. It marks the first time that these governments can review and update the address list of the census before the census is actually conducted. The hope is to produce a master address file which is substantially more complete than in the past by drawing on the expertise of local governments.

The local review program, which occurred after the 1990 census, was judged a failure by the Congress and outside experts. It only added 80,000 households, and half of those were in two cities, Detroit and Cleveland. Less than 25 percent of eligible governmental units participated. By contrast, the Census Bureau reports that to date, the new LUCA program has added well over 2 million addresses. In areas with city-style addresses, participation has more than doubled what it was in 1990; 52 percent of all eligible governments, representing 85 percent of the covered households, have participated.

Mr. Chairman, I think this is a promising start. I am sure there are problems; there are bound to be in a program as large and as complex as LUCA. Those problems will need to be examined and addressed. I hope we can do that in the bipartisan manner in which the program was developed. Thank you very much. I look forward to the witnesses.

[The prepared statement of Hon. Carolyn B. Maloney follows:]



**Congresswoman**

*14th District • New York*

# **Carolyn Maloney**

## **Reports**

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Rep. Carolyn B. Maloney -- Opening Statement  
Hearing on the Local Update of Census Addresses Program

September 29, 1999

Thank you Mr. Chairman. I am pleased that you have scheduled this hearing on the Local Update of Census Addresses Program -- or LUCA. This program is new for the 2000 Census and designed to correct some of the problems of the past. Even though the program is not yet completed, and final results are not available, Congressional oversight of LUCA is entirely appropriate. I also want to thank you for accommodating the wishes of the Minority with regard to witnesses.

I also want to mention the hard work of Reps. Thomas Sawyer and Thomas Petri, former members of the Census Subcommittee. After the 1990 Census, they realized that one of its major deficiencies was the way in which local governments had the opportunity to review addresses in their jurisdictions. They worked together in a bipartisan manner to improve the process and the result was P.L. 104-130, the Census Address List Improvement Act of 1994. I believe this program represents a tremendous improvement over the local review as it was conducted in 1990.

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The local review program which occurred after the 1990 Census was judged a failure by Congress and outside experts. It only added 80,000 households, and half of those were in two cities, Detroit and Cleveland. Less than 25% of eligible governmental units participated. By contrast, the Census Bureau reports that to date the new LUCA program has added well over 2 million addresses. In areas with city-style addresses, participation is more than double what it was in 1990 -- 52% of all eligible governments, representing 85% of the covered households have participated.

Mr. Chairman, I think this is a promising start. I'm sure there are problems, there are bound to be in a program as large and complex as LUCA. Those problems will need to be examined and addressed. I hope we can do that in the bipartisan manner in which the program was developed. Thank you.

Mr. MILLER. Mr. Davis, do you have an opening statement?

Mr. DAVIS. Well, thank you very much, Mr. Chairman. As a matter of fact, I do. First of all, let me commend you for the number of these hearings that are being held and for the efforts that you are making to make sure that we provide the kind of oversight and have the kind of information that is necessary to understand what is going on with the Census Bureau and the taking of the census. So, I want to thank you for convening this hearing.

And as census day rapidly approaches, I think, too, that it is important we continue to evaluate our plan to ensure we have the most accurate census in the history of our country. This partnership between the Census Bureau and local governments is one that is commendable. Tribal governments, especially, nationwide should lead to a vast improvement in accuracy and completeness of the address list for the 2000 census.

This pre-census local review provides a real opportunity for local governments to get involved earlier in the process and to help improve the outcome of the 2000 census. In 1990, local and tribal government officials were allowed only 15 days to review the number of addresses in each census block. LUCA will provide 3 months for participants to review the address list and related maps.

I'm also pleased that of the 16,030 eligible local and tribal governments, that 8,400 participated in the LUCA program for city-style addresses. This represented 52 percent of the eligible governmental units. Those governments included 85 percent of the eligible housing units. There are also reports that of the over 30,000 governments in non-city-style areas, that 10,779 governments participated.

I look forward to hearing the testimony of Dr. Prewitt with respect to some of the challenges and successes that we have encountered to date. In addition, I look forward to the testimony of other witnesses who will share with us today. So, I thank you, Mr. Chairman, and I look forward to this hearing.

[The prepared statement of Hon. Danny K. Davis follows:]

DANNY K. DAVIS  
7th District, Illinois  
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COMMITTEE ON SMALL BUSINESS

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**STATEMENT OF REPRESENTATIVE DANNY K. DAVIS**  
**"Evaluating the Local Update of Census Addresses Program"**  
**Wednesday, September 29, 1999**

Mr. Chairman, thank you for convening this hearing to evaluate the Local Update of Census Addresses Program (LUCA). As Census Day rapidly approaches it is important that we continue to evaluate or plan to ensure that we have the most accurate Census to date.

This partnership between the Census Bureau and local and tribal governments nationwide should lead to a vast improvement in accuracy and completeness of the address list for the 2000 Census. This pre-census local review provides a real opportunity for local governments to get involved earlier in the process and help to improve the outcome of the 2000 Census. In 1990, local and tribal government officials were allowed only 15 days to review the number of addresses in each census block. LUCA will provide three months for participants to review the address list and related maps.

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I look forward to hearing the testimony of Dr. Kenneth Prewitt with respect to some of the challenges and successes that we have encountered to date. In addition, I look forward to the testimony of our other witnesses who will share important testimony with us.

Thank you.

Mr. MILLER. Thank you. If I could ask the first panel to stand and raise your right hands if you would, please?

[Witnesses sworn.]

Mr. MILLER. Thank you. And let the record acknowledge that the three witnesses have responded in the affirmative. And with that, Dr. Prewitt, it's a pleasure to have you here again, as I said, this week.

**STATEMENT OF KENNETH PREWITT, DIRECTOR, BUREAU OF THE CENSUS, ACCOMPANIED BY JOHN THOMPSON, ASSOCIATE DIRECTOR FOR DECENNIAL CENSUS, BUREAU OF THE CENSUS; AND PRESTON JAY WAITE, ASSISTANT TO THE ASSOCIATE DIRECTOR FOR DECENNIAL CENSUS, BUREAU OF THE CENSUS**

Dr. PREWITT. Chairman Miller, it is a particular pleasure to be here today. The last time we met, we obviously started the testimony by reiterating our concern about the continuing resolution. You produced for us, and we are really deeply appreciative of that. Had we gone into the next 2 or 3 weeks without the mark that has now been presented to the President, it would have been very difficult for the census, as you know. So, we are extremely pleased by the work that you did.

Mr. MILLER. I might note that, you know, if there is another CR needed, this is really for 4 weeks rather than 3 weeks. Is that correct?

Dr. PREWITT. Yes.

Mr. MILLER. But we have done as good a job as we could and, of course, everybody is working together on this, so I am glad. I appreciate those comments.

Dr. PREWITT. And, it is a pleasure to talk to you today about the LUCA program. I am accompanied by John Thompson, the Associate Director for Decennial Census, and also Jay Waite, the Assistant Director for the Decennial Census. I will provide the oral testimony, and if there are technical questions, we may turn to them.

Mr. Chairman, in your opening comments you commented that if we relied solely on LUCA, you would be concerned, and I appreciate that concern. The first, most important point to make is that LUCA is part of a multi-part process of interlocking, often overlapping programs designed to create our address file. An address file can be improved then from one of three sources, and to put LUCA in context, I want to just briefly reiterate that principle.

When efforts to compile the address list for census 2000 began in the early part of this decade, and they won't be completed until next year, fiscal year 1999 saw the completion of key steps in building the address list. In August, we completed preparation for the address label tape that now contains about 119 million addresses. The work of our local and tribal partners in LUCA contributed heavily to this accomplishment, but we also used the U.S. Postal Service and our own review and address listing operations. So, this is a three-tiered strategy, not a single-tiered strategy.

It has been a massive complex job, it has involved developing and running nearly 1,300 individual computer programs, involving more than 530 million lines of code. The programs were designed to create 440,000 large-format multicolor map sheets, nearly 10 mil-

lion pages of address listings for review by local and tribal governments, more than 6.1 million smaller black and white map sheets, and 13 million pages of address lists for use by our field staff. So, it is large and complicated.

I want to very quickly describe the major procedures in the two different regions—mailout/mailback and then in update/leave. To remind us all, what we call mailout/mailback focuses primarily on the 96 million housing units that have city-style addresses, where they get their mail from the post office. Examples of a city-style address would be 101 Main Street or 310 Oak Street, Apartment A. These are mostly, but not exclusively, in major urban centers. In these areas we compile the address list and the Postal Service delivers the questionnaires.

Since early in the decade, the Bureau has been working to find a way to improve the address list and to correct the deficiencies in the 1990 development process. Early is the key word. At this point in the last census, we had minimal input from the U.S. Postal Service and minimal to nonexistent input from the local and tribal governments in compiling our address list. For 2000, then, we have a completely different order of engagement already with these two other major partners.

Working with the U.S. Postal Service has identified new streets that have been built since the 1990 census. We have added these streets and associated address information to our geographic data base, and we have updated the address list with new housing unit addresses built since the 1990 census.

This process added approximately 7 million addresses to the base list that we had carried over from 1990. Then, of course, in addition to cooperation with the Postal Service, we have worked with our LUCA partners, and I will discuss that in more detail below. Members of the committee have already acknowledged, or noted, approximately half of the eligible governments, or about 8,400 have participated. Our current estimate is these jurisdictions represent 91 percent of all addresses in the mailout/mailback areas.

In addition then to the Postal work and the LUCA work, we have conducted our own block canvassing operation. To ensure uniform quality and a complete census address list, regardless of LUCA participation, the Census Bureau field verified the entire mailout/mailback portion of the address list. This operation took place the first half of 1999 and identified additions, address corrections, and deletions to the address file.

In my written testimony there is one attachment, a one very straightforward table, which I will refer to briefly at this moment. It illustrates the effect of LUCA and block canvassing on the address list for the mailout/mailback areas. You'll see at the top that the original master address file had addresses that number slightly over 90 million. That is after we had done the work with the Postal Service. If you go down to the bottom, you will see it is now 96 million, which means that the combination of LUCA, block canvassing, and address listing by the Bureau has added 6 million addresses. You also will see that under the additions, which initially numbered 11 million, that a large number of them came from both LUCA and block canvass. That is about 3 million. Block canvass alone found 5½ million, and the LUCA process, as it has already

been noted, found about 2 million independently, slightly more than 2 million.

However, an address list correction process also includes deletes. And as you look at the numbers there, you see that we found it necessary to delete as many as 5 million addresses. The vast majority of those were deleted through our block canvass operation, and then there is some conversion issues as well. But that gives you an overview—and I want to stress—an overview of the fact that we have had more than one operation going on in order to assure the best city-style address list that we can construct.

Let me then quickly refer to the update/leave areas and how we have conducted those operations. That area includes about 24 million housing units. They have many different kinds of addresses, mostly in small towns, rural areas, where address systems have less geographic structure. An address might be Rural Route 1, it might be a Postal Box number. In this area, as we have stressed before, census enumerators will deliver questionnaires to every housing unit on the list, and they will at the same time check for any missing addresses.

In the update/leave area, the Census Bureau created the initial 2000 address list through a systematic field operation called address listing. Temporary Census Bureau staff visited every housing unit in their assignment areas to obtain, where possible, the occupant's name, mailing address, and telephone number. If a housing unit did not have a clearly posted address, the address lister recorded a location description. In all cases, the address lister also recorded the relevant census geographic codes to document the location of each housing unit and noted the housing unit's location on the Census Bureau map. The Census Bureau then keyed the addresses and related information to add it to the address list. This process listed approximately 24 million addresses.

Then as we had done in the city-style areas, we turned to our local partners through the LUCA program and invited nearly 30,000 local and tribal governments, entirely or partially covered by the address listing operation, to review the relevant portions of the census 2000 address list. And, it has been noted about 10,000 or 36 percent of those units have participated in the program. This represents about two-thirds of all addresses in the update/leave areas.

Approximately 5,000 of the governments then returned corrected block counts and identification from about 114,000 blocks. We have now rechecked our address list for those blocks, added the corrected information where appropriate through the master address file and, of course, we are now in the process of sending our results back to our LUCA partners.

To complete the LUCA process, we provide to each of the participants that have sent in corrections our response to their suggestions. This is called final determination. They can use the results to decide whether they wish to appeal any address to the Central Address List Review Appeals Office that has been established by the Office of Management and Budget. Participants will have 30 days to review the list and file an appeal. By law, the appeals are all to be decided before the decennial census date in order to allow sufficient time to prepare and deliver questionnaires.

In late 1999, the Census Bureau will also provide an opportunity for participating governments to review the list of special place addresses. As has been mentioned before to this committee, local and tribal governments with city-style addresses will also have an opportunity beginning in January to identify newly constructed housing units that we will need to visit to determine if they should be enumerated.

We also will continue to update the address file with work from the U.S. Postal Service. We call these the refreshes from the USPS information. The last will be included in January 2000, and the additional addresses from these refreshes will be delivered questionnaires.

The process as described covered more than 99 percent of the housing units in the United States and Puerto Rico. In very remote areas, and areas with significant seasonal resident population, the Census Bureau will employ a list method of enumeration. That is a very quick overview.

Mr. Chairman, I now will address the three specific issues listed in your letter of invitation. Your first question: illustrate the participation rates of eligible local governments in the LUCA program and explain the Census Bureau's definition of participation.

We define as participating, those governments that received address materials for review and have not, to our knowledge, officially dropped out of the program. In order to receive materials for review, localities had to express an interest in participating and submit a signed pledge to maintain the confidentiality of the materials.

A government jurisdiction could include both mailout/mailback and update/leave procedures, and thus could be invited to participate in both phases of the LUCA program. Based on this definitional construct, the overall participation rate was approximately 44 percent, and this did include 85 percent of the country's addresses. The participation rate differed for mailout/mailback areas. It was about 50 percent, and as I said before, it included 91 percent of those addresses. The rate for update/leave areas was about 36 percent and included about 67 percent of the addresses.

The second question, Mr. Chairman, was discuss the percentage of households in the United States that are covered by the LUCA program and explain some of the hazards to local governments for not participating. As I have already suggested, over 99 percent of the U.S. housing units are in areas covered by the LUCA program.

With respect to the question of hazards, participating governments used their knowledge about local situations to help the Census Bureau improve the quality of the address list for their areas. Governments that did not participate in LUCA missed this opportunity to help ensure a complete and accurate address file, but as I have explained, LUCA is just one of several ways that we compile addresses.

We realize that many local and tribal governments may not have the staff, resources, or expertise needed to participate in the LUCA program. And thus, we have taken steps where necessary to compensate for this. I have already mentioned the block canvassing. We added this to ensure uniform quality and a complete census 2000 address list regardless of LUCA participation. The Census



Bureau determined in the summer of 1997 that we needed to add a 100 percent field verification activity in areas with mostly city-style addresses. We believed this operation was needed to ensure address list completeness and quality.

In the update/leave/mailback areas, census enumerators will conduct a 100 percent field canvass of addresses at the time they deliver questionnaires. And, we have significantly strengthened quality control procedure in this area. These efforts will help compensate for those areas that did not participate in the LUCA program. To be emphatic on this point, census 2000 includes a direct Census Bureau on-the-ground effort covering the entire United States, walking every city and town block and driving every rural road.

Your third question, Mr. Chairman: please address the concerns of local governments regarding delays in returning the corrected address lists to the local governments for LUCA 1998. These are serious legitimate concerns. The Census Bureau experienced problems and delays with its initial plan. We then put in place a plan to correct these earlier problems and set for ourselves a more realistic schedule.

We appreciate that changes to an announced program make it difficult for our partners who, themselves, must plan ahead in their use of staff and resources. Their frustration is understandable. Below I will explain how the new plan does try to compensate by reducing the operational burdens. Nevertheless, I want to emphasize that we believe these to be legitimate and serious concerns and that there were delays between what we had promised we would deliver and what we did deliver. The Census Bureau paid a price in a public relations setback with our partners. But we believe the design changes have improved the quality of the address list, which is the goal that we all share.

That is, in exploring the issue of delay, I would like to draw a distinction between delay and the ultimate product, and the quality of the ultimate product. The Census Bureau has made every effort to inform local and tribal officials as soon as possible when program changes became necessary and to minimize the affect of those changes whenever possible. It is my belief that a significant majority of the local and tribal partners in the LUCA program have found the Census Bureau to be responsive to their concerns.

Indeed, since I wrote these words, Mr. Chairman, I have had an opportunity to read the testimony the GAO will be presenting to you momentarily, and we note with some pleasure that on the key issue of the responsiveness, the quality, and the timeliness of the Census Bureau's response on LUCA, somewhere in the neighborhood of 10 to 15 percent of the jurisdictions expressed concerns, which is to say in the neighborhood of 85 percent to 90 percent are reporting a very great or moderate degree of appreciation of the timeliness and the quality and responsiveness of the Census Bureau. We take some pleasure in the report of the GAO on that score.

Indeed, I am pleased to report—I will not use glowing language, but despite the problems we have encountered, our local and tribal partners have been able to participate, those that wish to, in what we now think is a successful program. It is not a program without

problems, but it is, in general, a quite successful program, I think, as the GAO report confirms. We encountered problems, but because we started early, we had time to make refinements and to correct the problems. Through our extensive outreach efforts, nearly twice as many local and tribal governments are participating in LUCA as participated in the 1990 program. And as we all now have said, these cover about 85 percent of all addresses.

I earlier noted that we tried to reduce burden on our partners compared to the original design. To illustrate this, consider the issue of returning address corrections to the local and tribal officials. Under our original plan, the LUCA program would have had seven steps. Based on what we learned in dress rehearsal, the Census Bureau simplified and streamlined its plan. This change involved combining two steps, detailed feedback, with the step of final determination.

Basically, this change means that we are simplifying the program for participants. We will provide them the information after we have verified, not just the disputed, all addresses provided by the participants that do not match the results of the block canvassing operation. It saves time in the schedule, because we do not need to produce, deliver, and ship detailed feedback materials separately from the final determination material. This means that we are able to start verifying addresses sooner because we will no longer have to wait for the reaction of the local and tribal governments.

I should note—and this is an important point—we will mail questionnaires even to addresses that did not match to the block canvassing operation, but we will not conduct nonresponse followup to those addresses. We will conduct nonresponse followup only if the address has been verified. But all addresses will get the questionnaire.

You have also heard about delays in our LUCA program for update/leave. As a result of these delays, we are forced to compress the review time that local and tribal governments had, but it is important to stress that even as we compressed the review time, we changed the procedure substantially. That is, in the update/leave areas, the local participants were initially expected to review on an address by address basis. But now in the new program, they only have to review at the level of housing unit counts at the block level, a fundamentally different set of responsibilities.

So Mr. Chairman, in conclusion, I would like to emphasize that despite the problems that we have encountered—and they have been serious, and we apologize for them—we think that the LUCA program has contributed to the overall quality of the address list. But second, that it is only one thing leading to the quality of that address list. It is also our own on-the-ground work that matters, and it is also our work with the post office. I think that we do go into census 2000 with an address list that is a vastly improved product from the one that we used in 1990. Thank you.

[The prepared statement of Dr. Prewitt follows:]

**PREPARED STATEMENT OF  
KENNETH PREWITT  
DIRECTOR, U.S. BUREAU OF THE CENSUS**

**Before the Subcommittee on the Census**

**Committee on Government Reform**

**U.S. House of Representatives**

**September 29, 1999**

Mr. Chairman, Mrs. Maloney, and members of the Committee:

It is a pleasure to be here today to talk about issues related to the Local Update of Census Addresses program known as LUCA. I am accompanied by John Thompson, the Associate Director for Decennial Census, and Jay Waite, the Assistant Director for Decennial Census. LUCA is one of the major operations in compiling the address list for Census 2000 and one of the major partnership efforts between the Census Bureau and local and tribal governments. It is important to note that LUCA is part of a larger, multi-part process of interlocking and often overlapping programs designed to obtain knowledge from many different sources that will enable us to have the most complete address list possible for Census 2000. An address can be added to our list from any one of these sources. So, in essence, to put LUCA in its proper context, I must talk about this entire process.

The importance of having a complete and accurate address list cannot be overstated. We will mail or deliver questionnaires to every housing unit on the list, check in returned questionnaires, and follow up on those valid housing units for which a questionnaire is not returned. Without such a control list, we cannot have an accurate census. That is why we have expended so much effort over several years to reach where we are today.

We have called Fiscal Year 1999 the Year of the Address List, and for good reason. While efforts to compile the address list for Census 2000 began in the early part of this decade and won't be completed until next year, FY 1999 saw the completion of key steps in the process of

building an address list. In August, we reached one of the very essential milestones of Census 2000. We completed preparation of addresses that we will include in the questionnaire address label tape, which we will soon deliver to questionnaire printing contractors. This file now contains over 119 million addresses, not including about 1.5 million now being prepared for Puerto Rico. Future steps in address list development will change this number. While we will deliver questionnaires to all of these addresses, followup activities will determine the final number. The work of our local and tribal partners in LUCA contributed to this success. But remember that LUCA is just one piece of the puzzle. We also used United States Postal Service (USPS) information and the results of our own field review and address listing operation.

The combined LUCA efforts involved a tremendous effort on the part of several divisions at Census Bureau headquarters, our 12 regional census centers, our National Processing Center in Jeffersonville, Indiana, and more than 44 percent of the 39,000 governmental units in the United States covering 85 percent of the addresses. Because of these efforts, I can say today that I am very confident that we will meet our goal--the goal we are striving for with LUCA and all our other programs--to have as complete an address list as possible for Census 2000.

This has been a massive and complex job. It has involved developing and running nearly 1,300 individual computer programs involving more than 530,000 lines of code. These programs were designed to create nearly 440,000 large-format multicolor map sheets and nearly 10 million pages of address listings for review by local and tribal governments, and more than 6.1 million smaller black and white map sheets and 13.1 million pages of address lists for use by our field staff.

There is still work to do before Census Day to ensure that our final list of census addresses is complete and current. But the work that we completed in FY 1999 has been significant, and we are in a great position to complete Census 2000 work.

#### ADDRESS LIST DEVELOPMENT OPERATIONS

I will now take a few moments to describe the major address listing operations that we have completed or nearly completed thus far.

##### Mailout/Mailback Areas

First, I will describe the three major address list operations for mailout/mailback areas--our partnership with the USPS, the LUCA program, and Block Canvassing. Mailout/mailback areas include nearly 96 million housing units that have city-style addresses used for mail delivery. Examples of city-style addresses would be "101 Main Street" or "310 Oak Street, Apt. A." These are mostly in major urban centers but also in many small and mid-sized towns and some rural areas. In these areas, we compile the address list and the USPS delivers questionnaires to every housing unit on the list at the time of Census 2000.

Since early in this decade, the Census Bureau has been working to find a better way to improve the address list and to correct the deficiencies in the 1990 address list development process. "Early" is the key word. At this point in the last census, we had minimal input from the USPS and from local and tribal governments in compiling our address list. One improvement for Census 2000 for mailout/mailback areas has been to start with our 1990 address list and then begin work early with the USPS to use their address information to update our list. Another such improvement is providing local and tribal governments an earlier and more effective opportunity to correct the Census 2000 address list for their areas.

Working with the U.S. Postal Service. Public Law 103-430, the Census Address List Improvement Act of 1994, directed that the USPS periodically provide a copy of the address information it maintains for mail delivery to the Census Bureau for use in creating and updating the housing unit address list. The Census Bureau used this information in two ways: First, to identify new streets that had been built since the 1990 census and add those new streets, their names, and the associated address information to our geographic data base so the information can be used to assign individual addresses to a census block. Second, to update the address list with new housing unit addresses built since the 1990 census.

These processes, which took place from 1995 through 1998 in the Census Bureau's 12 regional offices/regional census centers and with the assistance of more than 1,000 local and tribal governments, added approximately 7 million addresses to the 1990 census address list and determined which census block each was in.

Address List Review/Local Update of Census Addresses (LUCA). The Census Bureau developed the Address List Review Program, popularly known as the Local Update of Census Addresses, or LUCA, in accordance with the requirements of Public Law 103-430. Participants in the LUCA Program in mailout/mailback areas included some 8,400 local and tribal governments. Participating governments constituted about 50 percent of the more than 16,700 governments entirely or partially in mailout/mailback areas, and contained about 91 percent of the addresses. Most participants conducted their reviews between September 1998 and March 1999, which was mostly during fiscal year 1999. Approximately 5,800 governments returned additions and corrections to the Census 2000 address list.

Block Canvassing Operation. To assure uniform quality and a complete Census 2000 address list regardless of LUCA participation, the Census Bureau determined that it needed to field verify the entire mailout/mailback portion of the address list. This operation took place from January through May 1999 and identified additions, address corrections, and deletions to the address file.

Attachment 1 illustrates the effect of LUCA and Block Canvassing on an address list for mailout/mailback areas that started with over 90 million addresses and that now contains nearly 96 million addresses. The "Original MAF Address" line on this attachment reflects the address list after we updated the 1990 list with information from the USPS. MAF stands for Master Address File, another name we use for the Census 2000 address list. As you can see, these

processes added some 11 million addresses and deleted about 5 million addresses and there were an additional 380,000 deletes as a result of conversions from residential to non-residential.

#### Update/Leave (Mailback) Areas

Now, I will discuss address list operations for update/leave (mailback) areas. Update/leave (mailback) areas include about 24 million housing units that have many different address types, mostly in small towns and rural areas where address systems have less geographic structure. For example, an address might be "Rural Route 1" or it might be a postal box number. Census enumerators will deliver questionnaires to every housing unit on the list. They will also at the same time check for any missing addresses.

Address Listing Operation. In update/leave (mailback) areas, the Census Bureau created the initial Census 2000 address list through a systematic field operation called "Address Listing." During Address Listing, which took place from July 1998 through February 1999, temporary Census Bureau staff visited every housing unit they could find in their assignment areas to obtain (where possible) the occupant's name, mailing address, and telephone number. If the housing unit did not have a clearly posted address, the address lister recorded a location description. In all cases, the address lister also recorded the relevant census geographic codes to document the location of each housing unit, and noted the housing unit's location on their Census Bureau map. The Census Bureau then keyed the address and related information to add it to the Census 2000 address list. These processes listed approximately 24 million addresses that were included in the Census 2000 address list.

Address List Review/Local Update of Census Addresses (LUCA). Just as it did in mailout/mailback areas, the Census Bureau invited officials of the nearly 30,000 local and tribal governments entirely or partially covered by the Address Listing operation to review the relevant portions of the Census 2000 address list. This 1999 phase of the LUCA program involved nearly 10,800 local and tribal governments. This is about 36 percent of covered governments, which included about 67 percent of the addresses. Most participants conducted their reviews between February and May 1999.

Approximately 5,000 governments identified roughly 114,000 blocks in which they thought the Census 2000 address list was not correct. Census Bureau staff have completed rechecking the Census 2000 address list for these blocks and has added corrected information, where appropriate, to the MAF.

#### Next Steps

Completing the LUCA Process. This fall the Census Bureau will provide documentation to each of the LUCA participants in mailout/mailback areas and in update/leave (mailback) areas showing the Census Bureau's response to each of their LUCA suggestions. This is called the Final Determination. They can use these results to decide whether they wish to appeal any

addresses to the Census Address List Review Appeals Office that has been established by the Office of Management and Budget in accordance with the provisions of Public Law 103-430. Participants will have 30 days to review the lists and file an appeal. By law, the appeals are all to be decided before the decennial census date to allow sufficient time to prepare and deliver questionnaires for any addresses the Census Bureau must add to Census 2000. In late 1999, the Census Bureau also will provide an opportunity for participating governments to review the list of special place addresses that will be used for Census 2000; this information was not available when the initial reviews were completed. Local and tribal governments with city-style addresses will also have an opportunity, beginning in January, to identify newly constructed housing units that we will need to visit to determine if they should be enumerated.

Additional Updates from the U.S. Postal Service. The Census Bureau plans to supplement the Census 2000 address list for mailout/ mailback areas with several "refreshes" from the USPS information, the last in January 2000. The additional addresses from these refreshes will be delivered questionnaires.

Completing the Census 2000 Address List. The processes described above cover more than 99 percent of the housing units in the United States and Puerto Rico. In very remote areas, and in areas with significant seasonal resident populations, the Census Bureau will employ a "List/Enumerate" method of enumeration. From late-March through mid-May 2000 (late-January through March 2000 for remote areas in Alaska), temporary Census Bureau staff, called enumerators, will collect the same street address (or location description) information as their counterparts did during the Address Listing operation and note the same types of map updates and map spots. Thus, the Census Bureau will create the Census 2000 address list for these areas as part of the enumeration process, rather than before the census. At the same time, the enumerators also will conduct the enumeration (this strategy will ensure that expensive follow-up visits need not be made to the housing units in these areas).

#### SPECIFIC ISSUES

Next, I will address the three specific issues listed in your letter of invitation.

*1) Illustrate the participation rates of eligible local governments in the LUCA program, and explain the Census Bureau's definition of participation*

We define as "participating" those governments that received address materials for review and had not, to our knowledge, officially dropped out of the program. In order to receive materials for review, localities had to express an interest in participating and submit a signed pledge to maintain the confidentiality of the materials. Public Law 103-430 protected the confidentiality of the Census 2000 address list by including it under Title 13 of the U.S. Code. Only those individuals officially designated by their government who sign a Confidentiality Agreement may have access to the Census 2000 address list.

A government jurisdiction could include both mailout/mailback and update/leave (mailback) procedures, and, thus, could be invited to participate in both phases of the LUCA program. As I mentioned earlier, the overall participation rate was about 44 percent and included 85 percent of the addresses; the participation rate for mailout/mailback areas was about 50 percent and included about 91 percent of the addresses; and the participation rate for update/leave (mailback) areas was about 36 percent and included about 67 percent of the addresses.

*2.) Discuss the percentage of households in the United States that are covered by the LUCA program, and explain some of the hazards to local governments for not participating*

Over 99 percent of the U.S. housing units are in areas covered by the LUCA program and participating governments contain about 85 percent of the housing units.

Participating governments used their knowledge about local situations to help the Census Bureau improve the quality of the address list for their areas. Governments that did not participate in LUCA missed this opportunity to help ensure a complete and accurate Census 2000 by participating in this program, but as I have explained, LUCA is just one of several ways that we compile addresses.

We realize that many local and tribal governments may not have the staff, resources, and expertise needed to participate in the LUCA program and we have taken steps, when necessary, to compensate for that. I have already mentioned the Block Canvassing. We added this to ensure uniform quality and a complete Census 2000 address list regardless of LUCA participation. The Census Bureau determined in the summer of 1997 that we needed to add a 100-percent field verification activity in areas with mostly city-style addresses. We believed this operation was needed to ensure address list completeness and quality. In the update/leave (mailback) areas, census enumerators will conduct a 100-percent field canvass of addresses at the time they deliver questionnaires and we have significantly strengthened quality control procedures in these areas. This effort will also help compensate for those areas that did not participate in the LUCA.

*3.) Please address the concerns of local governments regarding delays in returning the corrected address lists to the local governments for LUCA 1998*

These are serious, legitimate concerns. The Census Bureau experienced problems and delays with its initial plan. We then put in place a plan that corrected for these earlier problems and that set forth a more realistic schedule. We appreciate that changes to an announced program make it difficult for our partners who must plan ahead in their use of staff and resources. Their frustration is understandable. Below I will explain how the new plan does try to compensate by reducing the operational burdens placed on our partners. Although the Census Bureau paid a price in public relations with our partners, we believe that the design changes have improved the ultimate quality of the address list — which is the goal we all share.



The Census Bureau has made every effort to inform local and tribal officials as soon as possible when program changes are necessary and to minimize the effect of those changes wherever possible. It is my belief that a significant majority of the local and tribal partners in the LUCA program have found the Census Bureau to be responsive to their concerns, but on this I await with keen interest the GAO presentation of their systematic survey. And I am pleased that, despite the problems we've encountered, our local and tribal partners have been able to participate fully to make LUCA a successful program. We have encountered problems, but because we started early, we have had time to make refinements and correct the problems. Through our extensive outreach efforts, nearly twice as many local and tribal governments are participating in LUCA as participated in the 1990 Post Census Local Review; those governments cover about 85 percent of all addresses. So, thus far, response to the program has been great.

I earlier noted that we tried to reduce burden on our partners compared to the original design. To illustrate this, consider the issue of returning address corrections to the local and tribal officials. Under our original plan, the LUCA program would have had the following seven steps. First, the Census Bureau was to provide participants with addresses for review. Second, the participants were to provide the Census Bureau the results of their review. Third, the Census Bureau was to match the participant results to the results of the Block Canvassing operation and provide the participants detailed feedback on that match. Fourth, the participants were to review the detailed feedback to respond and request reconciliation of addresses they believed the Census Bureau erroneously excluded or included from the list. Fifth, the Census Bureau was then to verify the existence of disputed addresses and process the results. Sixth, the Census Bureau then would issue a final determination that would include the results of this final verification. Seventh, after receiving the final determination materials, participants could appeal any address they still believed the Census Bureau had not included on the Census 2000 address list.

Based on what we learned in the Dress Rehearsal, the Census Bureau simplified and streamlined this plan. This change involved combining the detailed feedback with the final determination, that is combined steps 3 and 6. A letter and flyer announcing the change were sent to every affected local and tribal government in February 1999.

Basically, this change means that we are simplifying the program for participants. We will provide them information after we have verified not just disputed but all addresses provided by the participant that do not match to the results of the Block Canvassing operation. Participants will no longer need to do a separate review of detailed feedback addresses that do not match to the Block Canvassing operation as well as identify specific addresses they believe are still missing or are incorrect in the final determination address list. It saves time in the schedule because we do not need to produce, deliver, and ship detailed feedback materials separately from the final determination materials. This means we were able to start verifying addresses sooner because we will no longer have to wait for the reaction of the local and tribal governments. I should note that we will mail questionnaires even to addresses that did not match to the Block Canvassing operation. We will followup on any addresses that have been verified and for which we do not receive a returned questionnaire.

You may have also heard about delays in our LUCA program for update/leave (mailback) areas. As a result of the delays, we were forced to compress the review time that local and tribal participants had. But it is important to stress that although the review time was reduced, the process was greatly simplified by eliminating the previously required address-by-address review. Instead, the Census Bureau asked that local and tribal governments document only the changes in the housing unit counts at the block level.

Mr. Chairman, in conclusion I want to emphasize three main points: First, despite problems we encountered, the LUCA program has been a success. Second, LUCA is just part of a much broader, multi-part process to develop an address list for Census 2000. And third, I am confident that we will have an accurate and complete address list for Census 2000. We began early in the decade working on our address list for Census 2000. We have already begun looking at ways to improve the process for the next census and we believe the American Community Survey offers an opportunity to keep the address list continually updated throughout the decade. I will be pleased to answer any questions.

# **CURRENT OPERATIONAL STATUS** **Address List Development--CITY STYLE**

## **RESULTS**

Original Master Address File Addresses	90,304,226
Plus Additions	11,094,789
Included in both LUCA and Block Canvass	3,072,069
Included in Block Canvass Only	5,687,293
Included in LUCA Only*	2,335,427
Minus Deletes	5,034,356
Deleted by both LUCA and Block Canvass	184,577
Deleted by Block Canvass Only*	4,606,730
Deleted by LUCA Only	243,049
Minus Conversions from Residential to Non-Residential	379,208
Both LUCA and Block Canvass	4,712
Block Canvass Only	356,024
LUCA Only	18,472
<b>TOTAL</b>	<b>95,985,451</b> (numbers as of 9-99)

\*Final result will change after including the findings from "field" confirmation which will be completed in November, 1999.

Mr. MILLER. Thank you. Did Mr. Waite or Mr. Thompson have any statement? We are going to try to stick with the 5-minute rule, because we do have four panels today, and we want to make sure we have plenty of time. I know that a lesson we learned in 1990 was the critical role of the address list and the inadequacies of that list. And in the 1994 legislation that Mrs. Maloney was referring to by Mr. Sawyer and Mr. Petri, the Bureau is working to move it along. Briefly, summarize the total improvements we have made in addressing this issue of 1990. I mean, this whole LUCA program is part of it, but how much better are we off today than we were 10 years ago in 1989? I mean, very briefly.

Dr. PREWITT. I think the best way to answer that is to simply say that in 1989, we, essentially, were working simply from a Postal address file. We never walked the streets. I am going to make sure we get it right. I wasn't there in 1989. Mr. Thompson was.

Mr. MILLER. Mr. Thompson.

Mr. THOMPSON. In 1989, we had an address list for the urban areas that we purchased from a commercial vendor, and we had gone over the ground once, and we sent it to the post office on two occasions. We had not had at that time a thorough review by local governments of the list. In fact, we didn't have the legislation that we now have that would have allowed for an effective review. So basically, we sent a commercial list to the post office for several updates, and we had gone over the ground once with the list.

Now, compare that to 2000, we have actually received and worked with the post office's address file all decade. We have been matching it to the 1990 address list. We have been improving our address list throughout the decade. We have been able to share our address list with local governments for them to review, and I think they have done that quite effectively, and we have also gone over the ground. So, I think we are considerably ahead of where we were in 1989.

Mr. MILLER. Do you have a number of the additional costs? I mean, I know we have put a lot more resources in it. We did some supplemental before your time, Dr. Prewitt, but supplementals to be able to do this master address list. Do you have an idea of the total cost of the master address list? And especially, even comparing it with 1990, because I think a lot of people are critical of the high cost of the census compared to 1990. And one of the costs is addressing. One of the major problems of 1990 is the address list.

Dr. PREWITT. I could provide that information to the committee. It is not readily available to me right now.

Mr. MILLER. Well, I'd be interested in the additional cost. We know the significance. I think the supplemental one was \$100 million alone to do the list. Let me get clarification on this.

I mean, one of the disappointments, I think, is the low participation by local governments. I wish there was more. You know, we hear back in our districts and around the country of local community leaders, how it is important and how they need to participate. And then, I guess we are getting a 40 percent participation rate, low 40's. So, that has to be disappointing. Is that disappointing to you, this participation rate? Especially for 2010, what we could do to even improve that?

Dr. PREWITT. Well, the most important thing we can do for 2010, of course, is to launch the American community survey, and you have already expressed your own support of that, I believe, because that is a constant updating of the address list in the entire country, which means we will never have to do this kind of just-in-time address file work again. Let us say, we hope we don't have to reproduce the 2000 experience in 2010 if we have the American community survey in the field.

However, to your point, it is very hard to judge. You know, I am sure some cities got this and took a look at it and said, "Look, we have got a pretty clean little city here. There is no reason to think there is going to be any problem." Therefore, they just set it aside. Some probably got it and said, "I don't understand this, we don't have the resources," and so forth, and set it aside. We have no way of knowing that.

I think the fact that it is 85 percent of the addresses in the country is more important almost than its 40 percent. Our number is slightly higher because we define participation differently from the GAO. But whatever it is, whether it is 50 or 40 percent, that it is 85 percent of the addresses suggest to us that the jurisdictions who had concern about their counts have participated and cooperated. We have talked about cooperation of the American public with the census before, which is just basic response rate.

So, it is disappointing, but I think not fatal. If we did not have the other two procedures; that is, the block canvassing and the update/leave procedures, then we would be more concerned. But because we are also walking this ground ourselves, we think we can compensate for the absence.

Mr. MILLER. Let me come up with a couple numbers. Even though my time is up, I am going to stretch a little bit. The GAO had one table that was 16,600 jurisdictions—9,700 to 9,800 agreed to participate, but only 5,800 sent back annotated material. And, that is where the 40 percent, I am assuming, comes from; but you are saying that 5,800 represents 85 percent of the addresses. So, it is mainly the large cities. The small towns are the ones that are failing to participate, I guess.

Dr. PREWITT. Yes, by definition. Unfortunately, a smaller number of jurisdictions participated than the total number of addresses.

Mr. MILLER. Right.

Dr. PREWITT. Mr. Chairman, the people who got the materials, and they did not send anything back to us, they may have looked at them and said fine. It is not an indication that there is a problem with the address list; it is quite the opposite. It might be an indication of satisfaction.

Mr. MILLER. You accepted 2.76 million changes. Is that approximately the right number? I am having to look at the GAO tables.

Dr. PREWITT. In this table, you will see that the LUCA process added in the city-style areas 2.3 million addresses. Those are still going through our own review. They haven't been fully accepted yet. We don't imagine all of those will survive to the final address file.

Mr. MILLER. Oh, OK. Well, then there is still too many that are still under appeal and are going to be——

Dr. PREWITT. Well, they are under review by us and then we send them back, our own judgment. Then, they can go into appeal if there is a difference of viewpoint.

Mr. MILLER. There is a significant amount of recommended changes from local governments. Some are valid and some aren't. One question you have is how many of these communities are missing. Could it be another 5 million changes and such? Well, Mrs. Maloney.

Mrs. MALONEY. OK. Thank you, Mr. Chairman. For the record, I want to correct a statement in your opening remarks so that we have accurate information for this very important issue. The 1995 National Academy of Science's report, Modernizing the U.S. Census, did say that about half of the people missed in the census lived in housing units that were missed entirely.

However, as you know, we both received a letter last year from the chairman of that panel, Dr. Charles Schultz, correcting that statement because full evaluations were not completed when the report was drafted. In fact, about two-thirds of the people missed in 1990 lived in housing units that were counted. Only one-third lived in housing units that were missed entirely. This was a vast improvement over 1980 in terms of completeness of the address list. I don't have the letter with me now, but I would like to submit it following the hearing for inclusion with the record.

[The information referred to follows:]

09/30/99 12:30 FAX

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February 9, 1999

The Honorable Carolyn Maloney  
 Ranking Minority Member  
 Subcommittee on the Census  
 U.S. House of Representatives  
 Washington DC

Dear Ms. Maloney,

You asked me about a sentence contained on p.103 of *Modernizing the U.S. Census*, the Report of the National Academy of Sciences Panel on Census Requirements in the year 2000 and Beyond of which I was the Chairman. The sentence stated: "Approximately one-half of census undercount is attributable to missed housing units".

In fact, for the 1990 Census, the fraction of the coverage error accounted for by missing housing units was 30.5 percent (see the *Report to the Congress - The Plan for Census 2000*, Revised Version, August 1997, Bureau of the Census, p.41). The statement in the Panel report refers to the results of the 1980 Census. I have queried staff who assisted in the panel's research, and it appears that this piece of evaluation data about the 1990 Census was not yet in hand at the time this part of the research was being undertaken.

Cordially,

Mr. MILLER. Without objection.

Mrs. MALONEY. Dr. Prewitt, the chairman in his opening statement reiterated his support for post census local review. I just want to say that I continue to oppose this bill on this issue, along with many State and local officials, the U.S. Conference of Mayors, and many editorial boards across the country. Dr. Prewitt, 6 months ago, the Bureau was opposed to this bill. I assume you still are, but I would like to give you the opportunity to state your position.

Dr. PREWITT. Well, I think for the reasons that the Census Bureau felt initially, that the post census local review would not be a major addition to our overall integrated census plan, we have the same position today that we had then when it was being discussed as legislation.

Mrs. MALONEY. Dr. Prewitt, in your testimony you mentioned that detailed feedback operation was combined with the final determination process. I know that some local governments viewed this as a lost opportunity to review the address list. Would you elaborate on why this isn't the case and why the final procedures are an improvement?

Dr. PREWITT. Certainly. Could Mr. Waite address that, please?

Mr. WAITE. Yes. The original plan involved taking the addresses submitted by the community and matching them to what we had done with our block canvass. Any mismatches, we were going to be sending back to the community and saying, these we didn't find. If you would like us to check again, we will. Otherwise, we won't. That was the original plan. So the communities would have had a chance to look at the full 2 million addresses that you see—2.3 million addresses on this list. They would have had to make a decision then whether to ask us to go back to verify them. And if they did, we would have gone back and verified them.

The changed plan, basically, we just skipped that step and said we will go back and verify all 2.3 million whether the communities wanted us to go back, whether they were concerned about those addresses or not. So, instead of just doing those addresses that were questioned by the community, we are going back and doing the verification for the entire set of addresses that were initially submitted by the community but did not match to our work on our block canvass. We are matching everyone we would have done plus some additional ones that they may not have called us to go back on again. Every address is being verified. That is being done right now.

Then after that, we give the communities the list and we tell them OK. Of the 2.3 million that we verified, we found these, we did not find these. They still have an opportunity at that point if they think that we didn't find all of the addresses to appeal those addresses that we didn't find.

Mrs. MALONEY. What lessons did the Bureau learn about LUCA from the census dress rehearsal, and to what extent were they incorporated for 2000?

Dr. PREWITT. To go back to Mr. Miller's earlier comment, the most important thing we learned is we desperately needed a seriously reengineered address file strategy. When we were in South Carolina—also in Sacramento, but primarily in South Carolina—we



were operating on the basis of a preengineered—pre-reengineered address file, and it had serious deficiencies.

Now, we didn't learn that from the dress rehearsal; it only confirmed something we already suspected. But by far, the most important thing was that we could not have gone into 2000 with the address file that we had if we built it up from 1990 in the conventional process. We learned a lot of other things as well as a more specific sort, like some of the new kinds of development that are occurring in the non-city-style areas.

Mrs. MALONEY. My time is up. Just very briefly, the GAO study indicates that the LUCA program has had considerable success, but there remains room for improvement. What do you think should be done to improve the LUCA program?

Dr. PREWITT. Well, with respect to the LUCA program for census 2000, there are certain things we will learn from this one if we do reproduce it for 2010, but I won't go into those lessons at this stage. I think the most important thing that we have to do in the remainder of the LUCA process for 2000 is we have to deliver what we say we are going to deliver when we say we are going to deliver it in a way that the local partners have an opportunity to then plan ahead and do their work.

We think we are now on schedule doing that. I didn't bring in all of our complicated procedure schedules, but with respect to the LUCA stuff, the reconciliation is going to be on schedule, and we have a new construction step, and it is very important that we maintain schedule on that. We are fairly confident, barring unforeseen operational complications, that we will be able to sustain our current pledges.

Mrs. MALONEY. My time is up.

Mr. MILLER. Mr. Davis.

Mr. DAVIS. Thank you very much, Mr. Chairman. If I could, you know, I was just sitting here thinking how great it is to live in a democracy where there are always options. And, I note that only about half of the local governments participated in the LUCA. What kind of information are we given as to why the other half pretty much chose not to participate?

Dr. PREWITT. Mr. Davis, I am sorry. We don't know. I would like to know the answer to that question, and perhaps as GAO continues to do its study of the LUCA process, it could inquire into that. After the fact, we will try to find that out. In the process of actually doing it, we simply send the materials out. We send out the criteria—

[Tape 1, side 2.]

Dr. PREWITT [continuing]. Do you think it goes back to what was suggested in the earlier comments by the chairman and Mrs. Maloney, that because it represents such a small number of the addresses, it is by definition smaller units. So, part of it is their own absence of local resources. We were surprised. For example, we sent materials to areas that turned out not to have a computer so that we had to reformat it in such a way that they could process these materials in a completely nonelectronic environment. So, we are talking about a very mixed array of resources in our 39,000 jurisdictions.

Mr. DAVIS. Haven't we also pretty much determined that it would be in their best interest to participate? If they don't have resources, in all likelihood, this might help them acquire some resources that they don't have or make them eligible for resources.

Dr. PREWITT. I think if we had known before this program started what we know now, that the U.S. Congress, when it passed the 1994 legislation, might well have considered what we will do for those communities that don't have either personnel resources, geographic resources, or technical resources. Is there any way in which we can make sure that they have those resources. We simply did not build that into the design for—

Mr. DAVIS. One of the things that always interest me when I am driving is that I sometimes pass through towns that say, welcome to Davisville, population 52.

Dr. PREWITT. Right.

Mr. DAVIS. And you know, I will look around, and it seems as though there are more than 52 people there. Did we get responses from those kind of towns?

Dr. PREWITT. See, I think that is exactly the point, Mr. Davis. They would have gotten this packet of material or this invitation letter and this promise of packet material and so forth. And they said, what does that have to do with us here with our 52 people in our 19 housing units? So, some of the nonresponse clearly is attributable to the very smallness of some of our jurisdictions.

Mr. DAVIS. Thank you very much, Mr. Chairman. I have no other questions.

Mr. MILLER. Mr. Ford, questions?

Mr. FORD. I don't really have any. It is always good to see the Director, and I sort of appreciate your willingness to come before this committee any and every time we invite you, sir. And I hope that at some point we let the guy go back and do his job. But at this time I would rather yield to Mrs. Maloney. I know she might have had some other questions.

Mrs. MALONEY. I will yield to Mr. Ryan.

Mr. FORD. And if not, I would yield to my friend, Paul Ryan, from Wisconsin if he is ready.

Mrs. MALONEY. Thank you.

Mr. MILLER. Mr. Ryan, do you have a question?

Mr. RYAN. Yes. Let me just ask you a quick question. What about the rural areas? My concern is that the participation rate with LUCA is a little lower with the rural areas than it has been with the cities, 36 percent, I think, versus half. What is it that we can do between now and the due date to beef up the rural areas? Are you doing something to try and get more local governments in the rural areas to participate?

Dr. PREWITT. Mr. Ryan, the big safety net with respect to the rural areas is really in the process in which we are going to conduct enumeration, which is kind of update/leave, which is to say, we put somebody in a car, on a motorcycle, or in a rowboat, or whatever it takes, depending upon the conditions, to do every block. The entire country has been divided up into blocks, and these will now be assigned to someone. In the rural areas, someone will go to every one of those blocks, and they already have a map with all of the units listed on it, but they have got to redo that

map, and they have got to add anything that they can find that an earlier process missed, whether it was a LUCA process or our own process.

Because we are our own post office in the rural areas, we are not going to mail the things, we are going to deliver them ourselves. That process is equivalent to, as I say, a complete on-the-ground verification of every housing unit. Now, in addition, and I haven't put this on the record before, we allow our local offices and our regional offices a lot of flexibility with respect to once they are into the process how they want to consult with local leaders and say, "Look, should we cross the creek and go down around the woods? Are there some new mobile units that didn't use to be there?" So, there will be a lot of that informal back and forth with local jurisdictions during the process.

Mr. RYAN. What about the governments that didn't participate, the 50 percent that didn't? Isn't it safe to assume that if they did participate, we could get a couple more million addresses onto the list? Is there any effort to try and get that participation up, to try and go after those who didn't send anything back?

Dr. PREWITT. At this stage, there would be no way we could reinvite governments to participate and get their material in time to process it. That is why it is much more useful for them and for us to be on the ground and working informally with them than to try to put them now into some formal process where the deadline has passed.

Mr. RYAN. The process you just described about finding people behind the woods and down the valley and improving the maps, you are talking about doing that during the enumeration, correct?

Dr. PREWITT. Correct.

Mr. RYAN. But obviously, it is a lot easier if they have good and more accurate maps prior to enumeration so they know that there is a valley there, that there are woods there, that they are going to the right place. What if that is not happening? What if they don't have a good map and maybe they don't learn about it?

Don't you think that post census local review is the best catchall, stopgap measure to make sure that: (A) When they are enumerating, they don't have an accurate map, which in rural areas it looks like it is a higher likelihood of not having accurate maps; (B) If they still miss something when they are actually enumerating, why don't we get that local county executive/county board member to say, "Hey, look, you missed that valley, you missed those woods," and give them a 60-day window to come back and correct it? What is wrong with that?

Dr. PREWITT. Mr. Ryan, just before we get to that, the process I did not mention yet, or didn't stress, is that in the update/leave areas, in the rural areas, we have got people walking the roads and going across the creeks and so forth. We have a very extensive quality control process. That is, we are going to do a high sample of every one of those blocks—doing quality control of every enumerator. So, that a block could be walked twice; first by the enumerator, and then by a quality control person who is then going to say to us at the end of the day—"Aha, that person didn't do a very good job." Here is three units, or two units, that they missed.

Mr. RYAN. And this quality control is going to be a local government official or a——

Dr. PREWITT. No. He has got to be a Census Bureau person who has to be sworn by us—all the confidentiality. In fact, I happened to bring our manual for our update/leave areas, which is a quite interesting set of instructions, maps, and how you do all of this, and so forth. But it makes a major point that your work is going to be checked every day. So, it is an extra incentive, if you will, for complete coverage. Before we get to that, that is before the post census local review question.

Mr. RYAN. One more thing—I see that I have run out of time here. The last time we were here, I asked you if you could send us the flight schedule of your media buys for your promotional materials. We haven't received that yet. Could we please have the flight schedule?

Dr. PREWITT. Yes. The reason you haven't—we actually haven't——

Mr. RYAN. You may not have it ready yet. I——

Dr. PREWITT. No. We have a meeting this Friday with the Secretary of Commerce. We have to go over it with them first before we can release it, it turns out. But we are very close to being able to do that. We haven't forgotten that you did make that request.

Mr. RYAN. OK.

Mr. FORD. Can I just ask one followup question, Mr. Chairman? I know my dear friend was asking questions regarding how we are going to make sure we can reach all the rural areas, and even some of the urban areas, and how we ensure we follow with the governments that have not responded. I know the question might have been asked before I got here for my colleagues.

Would you, based on what you know about 10 years ago, tell me where they were in terms of being prepared to get an accurate count. Are we better off based on objective data to the extent that you can be objective and not be biased. Are we better off today in terms of being prepared to get an accurate count than we were 10 years ago with LUCA? I know we had post census then, and if I am not mistaken, it was a bipartisan effort, Sawyer and Ridge, I guess the Governor now of Pennsylvania, pulled together to try to fix some of the problems they might have had, but would you say we are better off now in terms of being positioned to get an accurate count than we were 10 years ago?

Dr. PREWITT. Congressman Ford, we really do believe we are by a wide, wide margin. At this time in the 1990 census, we had had no interaction to speak of with the local governments about the address file. And, we had not very thick interaction with the U.S. Postal Service. So, we have added two major components, if you will; that is, the LUCA program and our work with the Postal Service, to improve this address file. And I think the chart, which we did go over just before you were able to come, suggesting that we have gone from a base list just with the post office work of 90 million to now with our block canvassing and our LUCA program to 96 million, suggests that if there are that many addresses to have been added in the last year's work, that means that had we not done the work that we did, we would have gone into the census 6 million addresses short.

Now, is that 6 million, is it really 6½, is it really 5½? We won't know until we are out in the field. But, it is not the difference in six and zero. We added 6 million addresses, or there will be somewhere in that number added by these processes.

Mr. RYAN. If my colleague will yield—

Mr. FORD. Yes, sir.

Mr. RYAN [continuing]. Just to add a statement, not really a question. I think LUCA is a bipartisan thing, but so was post census local review in 1990. That was bipartisan, as well. I believe that we should use every tool we have to try and improve enumeration. It is wonderful that we have added 6 million addresses. That is great. We can add 6 million more. I mean, we already know that LUCA was by best estimates 50 percent successful, meaning 50 percent returned to us, or something around that number. So, we know there are addresses we don't have out there. That is why I think on a bipartisan basis, post census local review in addition to LUCA is just giving us more tools to make it a more perfect enumeration. So with that, I yield back.

Mr. FORD. It was bipartisan, too, not to explode these doggone spending caps that are about to explode, but I hear you and I agree with you wholeheartedly. I just know that post census local review was talked about pretty badly by a lot of the local folks, and I just want to applaud the LUCA efforts and, hopefully, we can work through whatever differences we have here, Mr. Director, in regard to the politics. But you keep doing the job you are doing, because it sounds like the results are coming back the way we want them to come back.

Dr. PREWITT. Thank you.

Mr. FORD. I must say, if there was post census local review—we did in 1990 add 84,000, not 6 million. There are not 6 million addresses out there we haven't found yet. There may be some, but there is not anything like 6 million addresses that we haven't found.

Mr. RYAN. And weren't half of those addresses in Detroit and Cleveland?

Dr. PREWITT. Yes, that is true. Nowhere near Wisconsin or Tennessee, I might add. We want everyone to be counted.

Mr. MILLER. I have one additional question since the issue of post census local review came up during the question and answer. And it gets back to the question of trust. That is the reason I think we need to get as much local input and support as we can, you know. As you know, the GAO report refers to mixed results so far. That raises some questions of confidence in the whole census. And the whole idea of post census local review is to give local communities the idea that they are going to have a chance to catch mistakes at the last minute. And that is the reason a lot of small towns, the National Association of Towns and Townships, League of Cities, and organizations supported the idea of post census local review.

The question I have is what happens after you complete the census, and you send out the numbers in March 2001, and a local community says, you missed this apartment building, you missed this new development? It happened in 1990. You missed these 300 people? It is too late, the facts are over with? I mean, what happens

at that stage when the numbers are out? It could have been a computer error. I mean, it is not nothing intentional. It is just that mistakes are going to be made. What recourse is there at that time, or is it just too late for that community?

Dr. PREWITT. Mr. Chairman, the Census Bureau, during the discussion of the post census local review, reflected hard on that question, and recognized exactly the merit of what you are saying, that when the counts are finished and the city looks at it, it can say something went wrong. And it wasn't an address here or a housing unit there—it went wrong at a magnitude that we shouldn't have to live with. And the Census Bureau has designed something it calls post census count resolution, which would allow 39,000 jurisdictions the opportunity after the counts are finished to say that something went wrong in our community.

We have designed that program. We believe in it. We believe it is exactly the kind of insurance policy that you are talking about. Should there be a magnitude of, you know, an apartment building simply got missed, or what have you, that post census count resolution would be worked out with State demographers, which know a lot about their State.

All I can say is that we did design that. We discussed it informally with staff members on both sides of the aisle. We continue to believe in it. It is not currently part of our design, because we received no responsiveness from Congress yet, but we would be delighted to come back and—

Mr. MILLER. My understanding of that is that it did not involve the local official.

Dr. PREWITT. Oh, it does.

Mr. MILLER. It was the State demographer that was in charge.

Dr. PREWITT. But the State demographers are working with the jurisdictions in each of their States.

Mr. MILLER. But, it is after the fact though. It should be done later in the year, but in March 2001, they find a missing 500 people—I mean, in a State that is very concerned about it, Wisconsin—you know, big States like New York, 500 people will not make a difference but—

Dr. PREWITT. It is not—

Mr. MILLER. It is too late to do anything in March—I mean, once you know what the mistake is.

Dr. PREWITT. No. The post census count resolution process includes a procedure by which we would then go back and correct the numbers for the intercensal estimate program for the next decade. So, it is not too late. It was a very serious recommendation.

Mr. MILLER. Mrs. Maloney.

Mrs. MALONEY. Well, we have been called for a vote. I will be very brief. I just would like to thank the panelists for their testimony. It appears that LUCA has gotten off to a very promising start. This was a program that was created in a bipartisan way and I hope in a bipartisan way we can continue to support the Census Bureau and the LUCA program as they go forward in their work to get an accurate count. Thank you very much, and we will see you in a little bit.

Mr. MILLER. We have two votes, and so we are going to have to stay over there for 15 minutes. We will take a recess for approxi-

mately 20 minutes. And, as soon as I come back, we will begin. And thank you all for being here. You all don't need to remain for the rest of it.

Dr. PREWITT. Thank you very much.

[Recess.]

Mr. MILLER. Mrs. Maloney is on her way back from the vote, but it is all right for us to proceed. So Mr. Mihm, first of all, if you would stand and raise your right hand?

[Witness sworn.]

Mr. MILLER. Thank you. Please be seated. And welcome. I appreciate you being here with us today. With that, I would like to ask for your opening statement.

**STATEMENT OF J. CHRISTOPHER MIHM, ASSOCIATE DIRECTOR, FEDERAL MANAGEMENT AND WORKFORCE ISSUES, U.S. GENERAL ACCOUNTING OFFICE**

Mr. MIHM. Well, thank you, Mr. Chairman. It is a pleasure and an honor to appear before you today. In the interest of brevity, I will just take a few moments to hit the highlights of what is in my prepared statement.

As you know, my statement focuses on two initial measures of how well LUCA is working. First, the Bureau's operational experiences with the first phase of LUCA, known as LUCA 1998; and second, local government's views of the adequacy of local resources to review the census address list and maps, and the quality of the Bureau's materials and assistance. As you mentioned in your opening statement, Mr. Chairman, LUCA 1998 was targeted at jurisdictions with city-style addresses, containing about 80 percent of the Nation's housing units, or about 96 million households.

On my first point, the Bureau's experiences with implementing LUCA: The Bureau invited about 16,700 jurisdictions with city-style addresses to participate in LUCA 1998. However, most did not provide the Bureau with any input, as shown in table 1 of my written statement. According to Bureau data, about 40 percent of the eligible governments signed a confidentiality agreement with the Bureau, received materials for review, and then ultimately provided material back to the Census Bureau.

And that is really the key difference between our number and the Census Bureau's number. The Census Bureau is reporting the number of local governments that signed the confidentiality agreement and ultimately were sent material from the Bureau. We are reporting a subset of that; that is, the local governments that ultimately returned some input back to the Census Bureau.

These 40 percent of the local governments suggested almost 7<sup>3</sup>/<sub>4</sub> million changes to the census address list, as shown in my written statement. Of these suggested changes, about 5.4 million were additions to the census address list, and the Bureau has found about 2<sup>3</sup>/<sub>4</sub> million of these suggested additions to have been valid. So those are already locked into the census. However, the Bureau has not, at this point, accepted about 2.2 million suggested additions. These are going to be rechecked during the field verification reconciliation operation that is ongoing.

On the second topic I will discuss this morning, dealing with our survey of LUCA participants on their experiences, we looked at five

things. First, the availability of local resources to review census materials. Second, the adequacy of LUCA timeframes from the perspective of local governments. Third, user friendliness of census address list and maps. Fourth, the adequacy of Bureau training and other support. And fifth, and finally, the overall completeness and accuracy of census address list and maps.

My written statement provides details on our survey methodology and the results. Let me just touch on some of the major findings. First, LUCA appears to have stretched the resources of many local governments. About 44 percent of the local governments said that the human resources in their jurisdictions to do LUCA were not at all sufficient or were only sufficient to a small extent.

In contrast, only about 23 percent of local governments reported that their human resources were sufficient to a great or very great extent. Clearly, local governments were having problems with the extent to which they had people to do LUCA.

In regards to having the technology needed to review addresses, just over one-third of the local governments said that to a great or very great extent their technological resources were sufficient, while one-quarter reported that their resources were sufficient to a small or no extent at all.

Second, about 38 percent of the local governments reported that the 3-months the Bureau gave them to review addresses was adequate to a very great or great extent, while about one-quarter said it was adequate to a small or no extent at all.

Third, many local governments had positive views of the user-friendliness of census address lists and maps. We should note that this is an important development, because it appears to be quite a change from the experience during the dress rehearsal. Roughly half of the local government said that the Bureau's address lists were easy to work with to a great or very great extent, and about half reported the same for census maps.

Fourth, in regards to training and other Bureau support, about 28 percent of local governments were to a great or very great extent satisfied with LUCA training, while about 13 percent were satisfied to a small extent or none at all. The Bureau also made available a variety of resources that local governments could turn to for help in completing their reviews. It appears that the reference manuals were used more than any other source of information, and about 45 percent of the localities found the manuals to be of great use.

Overall—and this is the finding that Director Prewitt referred to—overall, about half of the localities were satisfied to a great or very great extent with the Bureau's assistance. Half of the local governments reported similar levels of satisfaction with the timeliness of the Bureau's response to questions.

Fifth, local governments gave the quality of the Bureau's address list and maps mixed reviews. For example, about 43 percent of the governments said that they had few problems with the accuracy and the completeness of the address list, while about 18 percent reported encountering problems to a great or very great extent.

In regards to the completeness and the accuracy of the Bureau maps, about half of the local governments said that they had prob-



lems to a small extent or not at all, compared to 16 percent that said they had problems to a very great extent.

Now, I realize that this has been a lot of information; there is a lot of data as a result of our survey. But in summary, Mr. Chairman, LUCA 1998 has had mixed results. On the one hand, many local governments said they were satisfied with specific aspects of the materials and the assistance that the Bureau provided to them. On the other hand, other components, such as training, received much less favorable reviews. Moreover, LUCA may have stretched the resources of local governments and the workload was greater than what most local governments had expected.

Most important, as you mentioned in your opening statement, the real impact that LUCA had on the overall completeness and accuracy of the census address list is not known at this point and will not be known until evaluations are completed after the census—of the accuracy of the census address list. This concludes my statement. I would be pleased to respond to any questions that you may have, sir.

[The prepared statement of Mr. Mihm follows:]

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**GAO**

United States General Accounting Office

**Testimony**

Before the Subcommittee on the Census  
Committee on Government Reform  
House of Representatives

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**2000 CENSUS****Local Address Review  
Program Has Had Mixed  
Results to Date**

Statement of  
J. Christopher Mihm  
Associate Director, Federal Management  
and Workforce Issues  
General Government Division



## Statement

## 2000 Census: Local Address Review Program Has Had Mixed Results to Date

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Mr. Chairman and Members of the Subcommittee:

I am pleased to be here today to discuss the Census Bureau's implementation of the Local Update of Census Addresses (LUCA) program. As you are aware, in 1994 Congress required the Bureau to develop a local address review program in order to give local and tribal governments greater input into the Bureau's address list development process. LUCA gives local and tribal governments the opportunity to review the accuracy and completeness of the Bureau's address information for their respective jurisdictions, and suggest corrections where warranted.

The success of LUCA is important because a high-quality census begins with an accurate address list and precise maps. Together, they help ensure that (1) questionnaires are properly delivered; (2) unnecessary and costly follow-up efforts at vacant or nonexistent residences are reduced; and (3) the correct portions of the population are counted in their proper locations, which is the basis of congressional reapportionment and redistricting.

LUCA's overall impact on the accuracy and completeness of the address list will not be fully known until after the census, when the Bureau will have completed additional verification procedures and can evaluate the accuracy and completeness of the address list. Therefore, as agreed with the Subcommittee, my statement today focuses on two initial measures of how well LUCA is working: (1) the Bureau's operational experience to date in implementing LUCA, and (2) local governments' views of the adequacy of local resources to conduct LUCA and of the quality of materials and assistance the Bureau has provided.

Our views are based on our examination of those jurisdictions with city-style address areas; that is, jurisdictions where the U.S. Postal Service uses house-number and street-name addresses for most mail delivery. Because this program was initiated in 1998, the Bureau refers to it as "LUCA 1998." According to the Bureau, about 80 percent of the nation's housing units are located within city-style jurisdictions.

We obtained information on the Bureau's implementation of LUCA by interviewing Bureau officials and analyzing Bureau data on local governments' participation in the program and the number of address list changes they suggested. We obtained local governments' views of LUCA by

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<sup>1</sup>Census Address List Improvement Act, P.L. 103-430, Oct. 31, 1994.

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Statement  
2000 Census: Local Address Review Program Has Had Mixed Results to Date

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surveying a stratified random sample of 150 city-style jurisdictions of varying sizes. Of these, 128 jurisdictions responded, yielding a response rate of 85 percent. Our survey results are generalizable to the 8,248 local governments that were sent LUCA 1998 materials and were participating in LUCA at the time our sample was drawn in January 1999. It is important to keep in mind that the data we present on the perceptions of local governments are estimates that are based on the results of our survey. We describe our survey methodology more fully in attachment I.

In brief, the Bureau invited nearly 16,675 local governments to participate in LUCA 1998. Of these, 6,673 (40 percent) returned material to the Bureau as of August 1999. The remaining jurisdictions did not provide the Bureau with any input. The Bureau does not know whether these jurisdictions (1) did not review the census address list, or (2) did review the list and decided not to respond to the Bureau. Local governments suggested about 7.74 million changes to the Bureau's address list, of which about 5.4 million were suggested additions. The results of our survey suggest that many local governments appeared to be satisfied with the quality of the materials and assistance the Bureau provided. However, a number of jurisdictions rated these items, and the availability of local resources to review LUCA materials, less favorably.

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## Background

To develop the address list for the 2000 Census, the Bureau is using a series of operations, including LUCA. LUCA is one of only two components of the Bureau's address list development program that gives local governments direct input into the Bureau's address database.

For LUCA 1998, the Bureau sent participating governments address list information and associated maps for their jurisdictions. Local governments had the option of reviewing either paper address lists or electronic address lists. Maps were available only in paper format. The local governments were to review this information for accuracy and completeness, and suggest additions, deletions, corrections, and other changes, where appropriate, to the Bureau. Bureau personnel were then to verify these changes—generally by visiting each address in question—and provide feedback to LUCA participants on the Bureau's actions.

Should local governments disagree with the Bureau's final decisions, they can appeal the Bureau's actions to an independent office established by the Office of Management and Budget. Appeals officers—who can be detailed or temporary federal employees, as well as contractors that have received special training—are to base their decisions on the validity of the map or address references supplied by the Bureau and local governments.

**Statement**  
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The appeals process for LUCA 1998 has not yet begun. All appeals are to be resolved no later than January 14, 2000.

LUCA was tested during the dress rehearsal for the 2000 Census that was conducted in Sacramento, CA; Columbia, SC, and 11 surrounding counties; and Menominee County in Wisconsin, including the Menominee American Indian Reservation. In our testimony on the status of the dress rehearsal before the Subcommittee in March 1998, we reported that LUCA encountered various implementation problems that adversely affected local governments' review efforts.<sup>3</sup> They included problems with the accuracy and completeness of the Bureau's address list and maps, as well as with the level of Bureau assistance. Following the dress rehearsal, Bureau officials said the Bureau took steps to address some of these shortcomings in time for LUCA 1998.

**The Bureau's  
Operational  
Experience in  
Implementing LUCA  
1998**

Although the Bureau invited all 16,675 jurisdictions with city-style addresses to participate in LUCA 1998, as shown in table 1, most did not provide the Bureau with any input. Indeed, according to Bureau data, of the 16,675 jurisdictions eligible for LUCA 1998, 9,796 (about 59 percent) volunteered to participate in the program and signed the Bureau's confidentiality agreement, which is a prerequisite for reviewing the Bureau's address lists. However, 1,017 initial participants decided to drop out of the program, and the Bureau ultimately mailed LUCA material to 8,779 local governments. Of these, 5,791 reviewed and annotated at least a portion of the address material, and 882 returned unannotated material. Thus, of the original universe of 16,675 jurisdictions, 6,673 (40 percent) returned something to the Bureau.

**Table 1: Local Governments'  
Participation in LUCA 1998**

<b>Eligible jurisdictions</b>	<b>16,675</b>
Jurisdictions that returned confidentiality agreements	9,796
Jurisdictions that were shipped materials	8,779
Jurisdictions that returned annotated materials	5,791
Jurisdictions that returned unannotated materials	882

Source: U.S. Census Bureau.

Bureau officials said that they were generally pleased with LUCA 1998 participation rates, in part because they exceeded figures from a similar program during the 1990 Census. Still, the Bureau cannot at this time determine the extent to which LUCA 1998 has contributed to the accuracy of the Bureau's address list. This is because important data, such as the

<sup>3</sup>Decennial Census: Preparations for Dress Rehearsal Underscore the Challenges for 2000 (GAO/T- GGD-98-84, Mar. 26, 1998).

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number of housing unit addresses they actually reviewed, are unavailable. Also, 2,106 local governments were shipped LUCA materials but did not provide the Bureau with any input. The Bureau does not know whether these jurisdictions (1) did not review the census address list, or (2) did review the list and decided not to respond to the Bureau.

The Number of Changes  
Suggested by Local  
Governments

The LUCA 1998 participants that furnished the Bureau with updated address list information suggested a total of about 7.74 million changes to the census address list, according to Bureau data (see table 2).

Table 2: Address List Changes  
Suggested by LUCA 1998 Participants

Type of suggested change	Number
Address additions	5,384,864
Address deletions	427,626
Other (e.g., corrections, geographic changes, etc.)	1,931,559
<b>Total</b>	<b>7,744,049</b>

Source: U.S. Census Bureau.

As originally planned, the Bureau was to confirm the validity of these changes as part of a subsequent address list development operation called block canvassing, which took place between January and May 1999. In this operation, temporary Bureau employees were to verify all city-style addresses by systematically traveling each street in an assigned area, comparing their on-site inspections with the address list, and thus identifying incorrect, missing, nonexistent, or duplicate addresses. Addresses that were not accepted by the Bureau during block canvassing were to be rechecked during a subsequent on-site inspection operation called "reconciliation."

However, according to Bureau officials, the Bureau underestimated the amount of time it would take to get agreements from local governments to participate in the program and then to prepare address lists for local governments' review. As a result, LUCA 1998 took several months longer to complete than the Bureau initially expected. In turn, a number of changes were submitted too late to be included in block canvassing and instead will be verified during the reconciliation process.

For example, of the approximately 5.4 million suggested additions, the Bureau determined that about 2.76 million were valid—2.0 million during block canvassing and another 760,000 from matching LUCA 1998 submissions with block canvassing results. The Bureau has not accepted about 2.2 million of the suggested address additions. This figure includes about 400,000 suggested additions checked during block canvassing. It also includes about 1.8 million additions that were not submitted in time to be

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included in block canvassing, and that were not independently found by the Bureau during block canvassing. According to Bureau officials, these 2.2 million addresses are to be included in its reconciliation operation.

### LUCA Participants Had Mixed Perceptions of the Program

In addition to the Bureau's experience in implementing LUCA 1998, the degree to which local governments were satisfied with the LUCA process is another early indicator of how well the program is working. We surveyed LUCA 1998 participants on their views of the (1) availability of local resources to review LUCA materials; (2) adequacy of LUCA time frames; (3) user-friendliness of LUCA address lists and maps, and the media on which they were provided; (4) adequacy of Bureau support; and (5) overall completeness and accuracy of LUCA address lists and maps. While many local governments generally gave favorable reviews to the materials and assistance the Bureau provided to them, a number of jurisdictions held less positive views. Further, the availability of human resources to review LUCA materials appeared to be particularly problematic for many local governments.

### Availability of Local Resources to Review LUCA Material

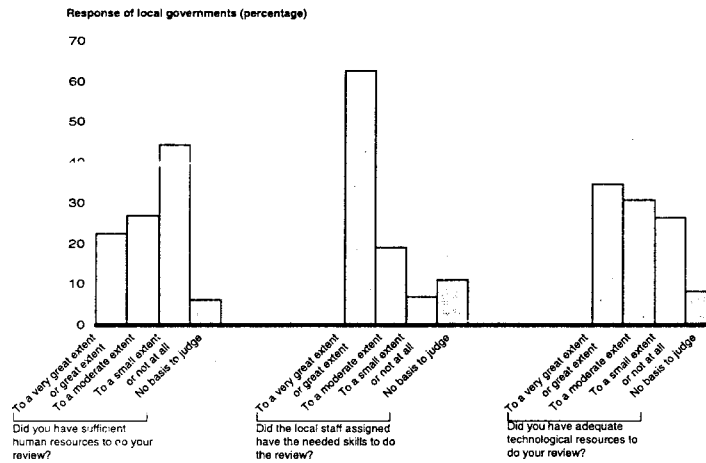
As shown in figure 1, about 44 percent of local governments participating in LUCA rated the human resources in their jurisdiction as not at all sufficient or only sufficient to a small extent. In contrast, only about 23 percent indicated that their human resources were sufficient to a very great or great extent. About 27 percent indicated that they were sufficient to a moderate extent.

On the other hand, our survey suggests that the local staff that were available had sufficient skills to review the LUCA material. Indeed, about 63 percent reported that the local staff assigned to LUCA had, to a great or very great extent, the skills needed for LUCA reviews, while 19 percent replied "to a moderate extent."

In terms of the sufficiency of local governments' technological resources to review addresses, the results were mixed. Just over a third of local governments indicated that, to a great or very great extent, their technological resources were sufficient, while about a quarter reported that their resources were sufficient to a small extent or not at all.

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Figure 1: Extent to Which Local Governments Had Sufficient Resources to Review LUCA Materials



Note: Percentages in figure have confidence intervals of less than  $\pm 12$  percent.  
Source: GAO survey of LUCA 1998 participants.

The availability of local resources appeared to be a factor in whether or not local governments fully reviewed the addresses and maps for their jurisdictions. About 14 percent of the local governments reported conducting a partial review of the Bureau's address list for their jurisdiction, while about 6 percent reported partially reviewing the Bureau's maps. Of those local governments that partially reviewed address lists, most cited limited resources for doing so. About 9 percent reported that they did not review the address lists, while about 16 percent did not review the maps.

Local governments that reported partial reviews typically focused their efforts on those areas that were new or changed since 1990, or had experienced high growth. Some local governments also limited their



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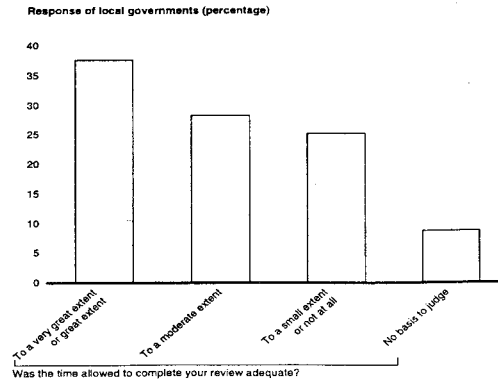
reviews to those areas where the local government's count of housing units differed from the Bureau's housing count, or to areas with multiple-family dwellings. According to Bureau officials, during training provided to local governments, the Bureau recommended that local jurisdictions conduct their reviews along these lines if they could not conduct full reviews.

Overall, the survey results suggest that LUCA can be a burdensome process for local governments. Indeed, about 71 percent of respondents indicated that the LUCA workload was much or somewhat more than they had expected, while 24 percent said it was about what they expected, and 5 percent reported that the workload was somewhat or much less than expected.

#### Adequacy of LUCA Time Frames

The Bureau gave local governments 3 months to review LUCA material. As shown in figure 2, about 38 percent of local governments reported that this time frame was adequate to a very great or great extent, while about 25 percent indicated that it was adequate to a small extent or not at all.

Figure 2: Extent to Which Local Governments Found the Time frame to Complete Their LUCA Reviews Adequate



Note: Percentages in figure have confidence intervals of less than  $\pm 12$  percent.  
Source: GAO survey of LUCA 1998 participants.

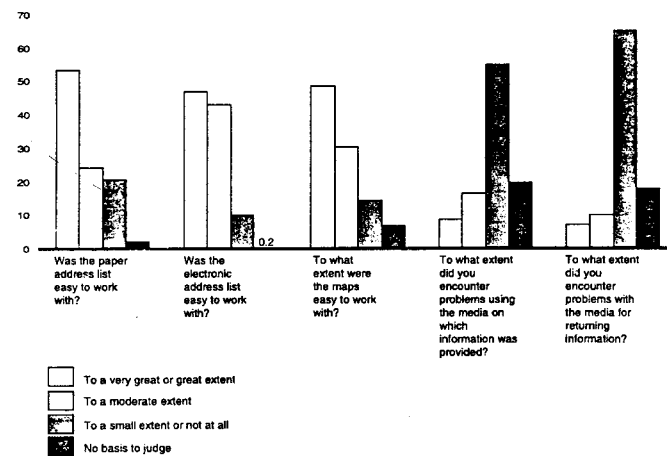
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### User-friendliness of LUCA Media

Many local governments had positive views of the user-friendliness of LUCA address lists and maps, and the paper or electronic media on which they were provided. As shown in figure 3, roughly half of the local governments reported that both the Bureau's address lists and maps were easy to work with to a great or very great extent. Likewise, most local governments reported that they encountered few or no problems with either the electronic or paper media on which the information was provided, nor the media for returning the information.

Figure 3: Extent to Which Local Governments Found LUCA Media Easy to Work With

Response of local governments (percentage)



Note: Percentages in figure have confidence intervals ranging from  $\pm 6$  percent to  $\pm 18$  percent.  
Source: GAO survey of LUCA 1998 participants.

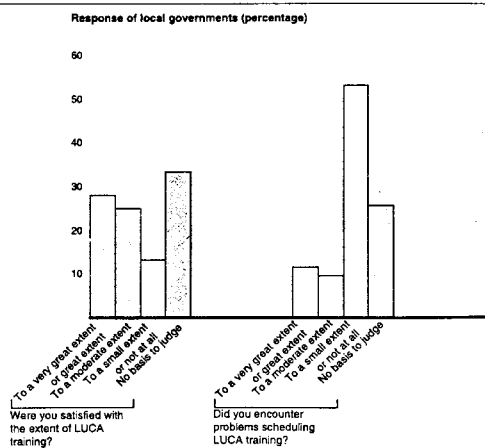
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### Adequacy of Bureau Support

To help local governments in their LUCA reviews, the Bureau provided various forms of support, such as formal training. Help was also available through different sources, such as reference manuals and direct Bureau assistance.

With regard to training, figure 4 shows that about 28 percent of local governments were satisfied with the extent of LUCA training to a very great or great extent, while about 13 percent were satisfied to a small extent or not at all. Local governments gave more favorable reviews to their ability to schedule LUCA training.

Figure 4: Extent to Which Local Governments Found LUCA Training to Be Adequate



Note: Percentages in figure have confidence intervals of less than  $\pm 12$  percent.  
Source: GAO survey of LUCA 1998 participants.

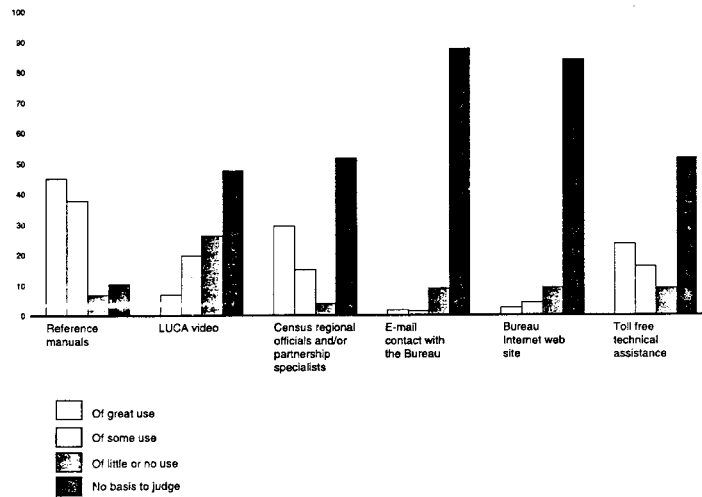
The Bureau made available a variety of resources that local governments could turn to for help in completing their reviews. The sources of information ranged from formal workshops and reference manuals, to a video. As shown in figure 5, it appears that LUCA reference manuals were

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used more than any other source of information. Moreover, 45 percent of localities found the manuals to be of great use. Local governments appear to have turned to the other sources of information, such as the Bureau's Internet web site and e-mail contact with the Bureau far less frequently, and reported finding them to be less useful.

**Figure 5: Local Governments' Views of the Usefulness of Bureau Assistance**

Response of local governments (percentage)



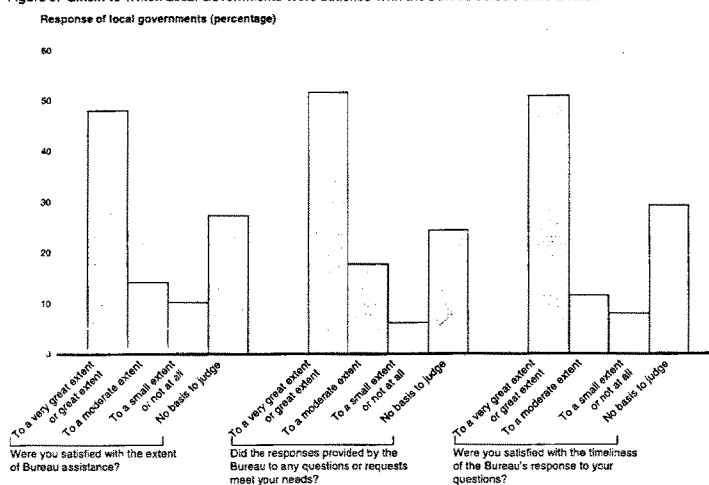
Note: Percentages in figure have confidence intervals of less than  $\pm 12$  percent.  
 Source: GAO survey of LUCA 1998 participants.

Overall, as shown in figure 6, about half of the localities appeared to be satisfied with various aspects of the Bureau's assistance. For example, about 48 percent indicated that they were satisfied with the extent of

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Bureau assistance to a great or very great extent, while about 52 percent reported that the Bureau's responses to their questions met their needs to a great or very great extent. Local governments gave similar reviews to the timeliness of the Bureau's response to their questions.

Figure 6: Extent to Which Local Governments Were Satisfied With the Bureau's Assistance Overall



Note: Percentages in figure have confidence intervals of less than  $\pm 12$  percent.  
Source: GAO survey of LUCA 1998 participants.

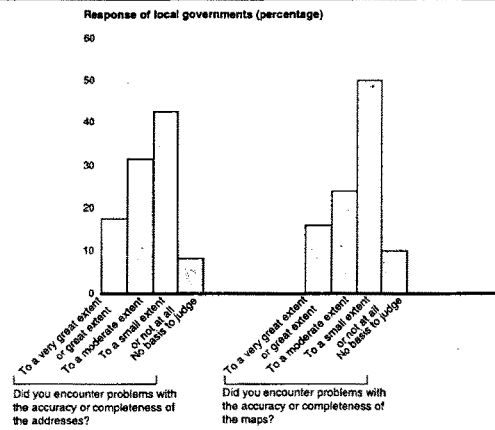
Overall Completeness and Accuracy of LUCA Address Lists and Maps

Local governments gave the accuracy of the Bureau's address lists and maps mixed reviews. For example, as can be seen in figure 7, about 43 percent indicated they encountered few problems with the accuracy and completeness of the address lists, while, about 18 percent reported encountering problems to a very great or great extent. Somewhat less problematic was the perceived completeness and accuracy of the Bureau's

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maps, where about 50 percent said that they encountered problems to a small extent or not at all, compared with 16 percent who indicated encountering problems to a very great or great extent.

Figure 7: Local Governments' Views of the Accuracy and Completeness of Bureau Address Lists and Maps



Note: Percentages in figure have confidence intervals of less than  $\pm 12$  percent.

Source: GAO survey of LUCA 1998 participants.

In summary, Mr. Chairman, the overall results to date of LUCA 1998 appear to be mixed. On the one hand, many local governments said they were satisfied with specific aspects of the materials and assistance the Bureau provided to them. On the other hand, other components, such as training, received less favorable reviews. Moreover, LUCA may have stretched the resources of local governments, and overall, the LUCA 1998 workload was greater than most local governments had expected. In terms of participation rates and suggested changes, the full impact that these indicators had on the overall completeness and accuracy of the Bureau's address list will not be known until well after Census Day.

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We will continue tracking the LUCA program as part of our overall review of the 2000 Census, and will keep Congress informed of the results of our work.

Mr. Chairman, this concludes my prepared statement. I would be pleased to respond to any questions you or other Members of the Subcommittee may have.

**Contact and Acknowledgement**

For further information regarding the testimony, please contact J. Christopher Mihm at (202) 512-8676. Individuals making key contributions to this testimony included Tom Beall, Robert Goldenkoff, Marcia McWreath, Anne Rhodes-Kline, and Lynn Wasielewski.

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## Scope and Methodology

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To meet our objective of obtaining information on the Bureau's experience to date in implementing the Local Update of Census Addresses (LUCA) program, we interviewed officials in the Bureau's Directorate for Decennial Census, including officials in the Geography Division, and in the Bureau's Regional Census Center in Dallas, TX. We asked these officials about the Bureau's time frames for providing local governments with address lists and maps for review, reasons why the Bureau's schedule was revised for completing the program, difficulties encountered, and lessons learned from the Bureau's dress rehearsal. We also asked Geography Division officials about lessons they had learned for improving the program for future Bureau survey work.

We also requested and obtained data from Bureau Geography Division officials on participation rates in the program, including data on the number of eligible entities to participate in the program, the number of entities that signed confidentiality agreements to participate in the program, and the number that were provided address lists and/or maps for review. We also requested and obtained data on the number of entities that returned annotated and unannotated address lists and/or maps.

To meet our objective of obtaining information on local governments' LUCA participation experience, we faxed a questionnaire to a stratified, random probability sample of 150 local governments that were participating in the Census Bureau's 1998 LUCA city-style address operation (LUCA 1998).

We drew our sample from a database, prepared for us by the Bureau, of local governments participating in LUCA 1998. We defined participants as those local governments that had signed confidentiality agreements, had been shipped at least some of the material needed to perform their review, and had not subsequently indicated to the Bureau that they had decided to drop out of the review process.

This database identified 8,248 local governments that were participating in LUCA 1998 in January 1999. This constituted the population from which we drew our sample. Each responding local government was subsequently weighted in the analysis to account statistically for all the members of this population, including those that were not selected.

As shown in table I.1, the population was stratified into eight groups based on the number of geocoded residential address records taken from the Bureau's master address file and delivered to the local government for its review. Also shown in table I.1 is the sample allocation for each stratum



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and the number of local governments that provided usable, completed questionnaires.

**Table I.1: Sample Allocation and Usable Returns, by Strata**

Number of address records	Number of local governments in sample	Number of local governments providing usable returns
500,000 or more	17	17
100,000–499,999	31	28
50,000–99,999	10	7
25,000–49,999	11	10
10,000–24,999	17	13
5,000–9,999	14	12
1,000–4,999	32	28
0–999	18	13
<b>Total</b>	<b>150</b>	<b>128</b>

The majority of items on the questionnaire were closed-ended, meaning that, depending on the particular item, respondents could choose one or more response categories or rate the strength of their perception on a 5-point extent scale. The remaining items were in an open-ended format; i.e., the respondent writes in the answer. We analyzed the open-ended responses by sorting them into categories based on the content of the responses.

After designing our questionnaire, we pretested it with local governments in the Washington, D.C., and Dallas, TX, areas. For each local government in our sample, we contacted the individual identified on the Bureau's database as the local liaison for the LUCA 1998 review. Based on our conversation with this contact person, we sent our questionnaire to this individual or a person designated by this individual as being the most appropriate person to respond to our questionnaire for the local government. We sent out our questionnaires between February 22, 1999, and March 23, 1999.

We received usable returns from 85 percent of the total eligible sample. Although we did not test the validity of the local governments' responses or the comments they made, we took several steps to check the quality of our survey data. Specifically, we (1) reviewed and edited completed questionnaires, (2) made internal consistency checks on selected items, and (3) checked the accuracy of data entry on returned questionnaires.

The overall survey results are generalizable to the 8,248 local governments that were participating in LUCA 1998 as of January 1999. Because we sampled a portion of local governments, all results are estimates and subject to some uncertainty or sampling error, as well as nonsampling

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error. Depending on the particular analysis being performed, percentages reported for the entire sample have confidence intervals generally ranging from  $\pm 2$  to  $\pm 18$  at the 95 percent confidence level. In other words, if we had surveyed all the local governments, we are 95 percent confident that the result obtained would not differ from our sample estimate, in the most extreme case, by more than  $\pm 18$  percent.

Our choice of sample size was adequate to support our objective of obtaining simple, overall estimates of participating local governments' views of their LUCA 1998 experience. However, this sample size is generally not large enough to provide the degree of statistical sensitivity that would be preferable for engaging in more detailed analyses of differences between various groupings of local governments or relationships between responses to two or more questionnaire items.

We conducted our work between September 1998 and September 1999 in accordance with generally accepted government auditing standards.

